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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,919	01/14/2004	Yen-Fu Chen	AUS920031038US1	3766
35525	7590	01/31/2007	EXAMINER	
IBM CORP (YA) C/O YEE & ASSOCIATES PC P.O. BOX 802333 DALLAS, TX 75380			ABDI, AMARA	
			ART UNIT	PAPER NUMBER
			2609	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	01/31/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No. 10/756,919	Applicant(s) CHEN ET AL.	
Examiner Amara Abdi	Art Unit 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 January 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 January 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected because of the following informalities:

Page 9, line 27, the examiner suggest inserting "109" after "a pointing device" for clarification, because 109 was mentioned in the drawing and not mentioned in the specification.

Appropriate correction required.

Claim Objections

2. Claims 1-9,12,14,16-20 objected to because of the following informalities:

- (1) Claim 1, line 18, "a reference" should be changed to "the reference", and on line 19, "an associated" should be changed to "the associated"

- (2) Claim 3, line 3, "a stroke" should be changed to "the stroke"

- (3) Claim 4, line 3, "an associated " should be changed to "the associated"

- (4) Claim 6, line 3, "a reference " should be changed to "the reference", and on line 4, "an associated" should be changed to "the associated"

- (5) Claim 9, line 4, "a record" should be changed to "the record"

- (6) Claim 12, line 2, "a reference" should be changed to "the reference", and on line 3, "an associated" should be changed to "the associated"

- (7) Claim 14, line 4, "a stroke" should be changed to "the stroke", and on line 11, "a comparison" should be changed to "the comparison"

- (8) Claim 16, line 16 and 17, "a reference" should be changed to "the reference"

- (9) Claim 18, line 3, both of "a reference" in the same line should be changed to "the reference"

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(10) Claim 20, line 5, “a number” should be changed to “**the** number”, and on line 6, “the” before “reference” should be deleted

Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1,10-15 are rejected under U.S.C. 101 because the claimed invention is directed to non- statutory subject matter.

In each of the claims 1,10,11,12,13,14 and 15, a” program” which is executed by a computer is being recited; however, a program which is executed by a computer would reasonably be interpreted by one of ordinary skill in the art as software, pre se. This subject matter is not limited to that which falls within a statutory category of invention because it is limited to a process, machine, manufacture, or a composition of matter. Software is a function descriptive material and function descriptive material is non-statutory subject matter.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, and 6-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al.

(US 6,694,056)

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(1) Regarding claim 1:

Ito et al. disclose a method of handwriting recognition comprising:

storing a respective reference parameter set of a plurality of reference character strokes of a reference character in a reference character dictionary (column 1, line 67) and (column 2, line 1-4), wherein each of the respective reference parameter sets of each of the plurality of reference character strokes have an associated references sequence number; (column 2, line 3-5), (the examiner interpreted stroke orders as a stroke sequence number)

receiving a stroke parameter set derived from user input of a handwriting stroke, wherein the handwriting stroke is one of a plurality of strokes requires for writing character; (column 2, line 6-9), (the examiner interpreted the coordinate string as the stroke parameter set which is sets of coordinate of points forming the stroke)

identifying a stroke sequence number of the stroke parameter set; (column 23, line 33-34), (the examiner interpreted that the stroke numbers are used to identify the stroke parameter sets)

responsive to identification of the stroke sequence number, comparing the stroke parameter set with a reference parameter set having an associated reference sequence number equal to the stroke sequence number (column 23, line 53-61), wherein the comparison excludes at least one of the reference parameter sets. (Column 24, line 4-5), (The examiner interpreted that during the comparison of the strokes, the stroke parameter set may be ignored for certain evaluation value (for example: value 10 in figure 52), as results at least one of the reference parameter sets will be exclude during the comparison)

(2) Regarding claim 2:

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Ito et al. disclose the step of storing as shown in figure 7 includes:

Maintaining each reference parameter set in respective fields of a table, where each of the stroke order sequence number is derived from respective field (column 8, line 18-20), and (column 9, line 1-2). (The examiner interpreted fetches as deriving)

(3) Regarding claim 3:

Ito et al. disclose a method where the step of identifying includes:

Incrementing a counter value on receipt of the stroke parameter set, the counter value corresponding to the stroke sequence number (column 10, line 31-35), (the examiner interpreted incrementing as adding a value to the stroke sequence number for example: "adding number 1", after judging that the stroke parameter set is a stroke candidate)

(4) Regarding claim 4:

Ito et al. disclose a method where the step of comparing includes:

excluding each reference parameter set having an associated reference sequence number not equal to the stroke sequence number (column 10, line 57-59), (the examiner interpreted that when the reference parameter set having an associated reference sequence number is different then the stroke sequence number indicates a poor match, as result it will be excluded from the search target)

(5) Regarding claim 6:

Ito et al. describe a method where the step of comparing includes:

Comparing, with the stroke parameter set, a reference parameter set with an associated reference sequence number within one of the stroke sequence number (column 24, line 9-12) and (column 2, line 12-14) and (column 10, line 25-29)

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(6) Regarding claim 7:

Ito et al. disclose the step of storing as shown in figure 3 includes:

storing reference parameter sets of a plurality of characters in the reference character dictionary (see the abstract), and (column 8, line 23-25).

(7) Regarding claim 8:

The method where each of the reference parameter sets of the plurality of characters are stored in respective records of the reference character dictionary, each record including a data element having value equal to a number of constituent strokes of the respective character. (Column 8, line 33-38), (the examiner interpreted that the data element having the area numbers and a number of direction having value equal to a number of constituent strokes of the respective character)

(8) Regarding claim 9:

excluding, from the comparison, the reference parameter sets of the record having the data element value less than the stroke sequence number. (Column 10, line 57-59), (the examiner interpreted that when the reference parameter set of the record have the data element value less or different then the stroke sequence number indicates a poor match, as result it will be excluded from the comparison)

(9) Regarding claim 10:

A computer program product in a computer readable medium for performing handwriting recognition of a language having character stroke order rules comprising:

a reference character dictionary including a record defining a reference character, the record including a plurality of reference parameter sets each respectively defining attributes of a stroke

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of the reference character, each of the reference parameter sets associated with a reference sequence number (Column 8, line 33-38), and instructions for receiving a stroke parameter set derived from a handwritten character stroke (column 2, line 6-9) and for identifying a stroke sequence number in which the stroke was input by a user, responsive to identifying the stroke sequence number (column 23, line 33-34) comparing the stroke parameter set with a reference parameter set having a reference sequence number equal to the stroke sequence number (column 24, line 9-12) and (column 2, line 12-14) and (column 10, line 25-29) and excluding a reference parameter set from the comparison that has a reference sequence number not equal to the stroke sequence number (column 10, line 57-59).

(10) Regarding claim 11:

The computer program product, wherein each of the reference parameter sets are stored in respective fields of the dictionary, the reference sequence number determined by the field. (See the abstract), and (column 8, line 23-25).

(11) Regarding claim 12:

The computer program product, wherein the first instruction identify a reference parameter set having an associated reference sequence number value within one of the stroke sequence number, and compare the stroke parameter set with the reference parameter set having the reference sequence number value within one of the stroke sequence number. (Column 24, line 9-12) and (column 2, line 12-14) and (column 10, line 25-29)

(12) Regarding claim 13:

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The computer program product, wherein the record includes a data element having a value specifying a number of constituent strokes of the reference character (Column 8, line 33-38)

(13) Regarding claim 14:

The computer program product, where the reference character dictionary includes a second record having at least one reference parameter set defining attributes of a stroke of a second reference character and a data element value specifying a number of constituent strokes of the second reference character (column 8, line 33-38), (the examiner interpreted that the second record have the same function as the other records) wherein the instructions, responsive to a determination that the number of constituent strokes of the second reference character is less than the stroke sequence number, exclude the reference parameter set of the second record from a comparison with the stroke parameter set (column 10, line 57-59), (the examiner interpreted that when the reference parameter set of the second record have the data element value less or different then the stroke sequence number indicates a poor much, as result it will be excludes from the comparison)

(14) Regarding claim 15:

The computer program product, wherein the set of instructions, responsive to receiving the stroke parameter set, increments a counter that identifies the stroke sequence number (column 10, line 31-35)

(15) Regarding claim 16:

A data processing system comprising:

a reference character dictionary including a record having a plurality of reference parameter sets each defining attributes of a respective stroke of a reference

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Character (column 1, line 67) and (column 2, line 1-4) each respective reference parameter set having an associated reference sequence number (column 2, line 3-5), (the examiner interpreted stroke orders as a stroke sequence number)

a memory that contains a set of instructions (column 12, line 7), (the examiner interpreted the memory as a storage medium); and

a processing unit (109 in figure 1) (column 11, line 64) and (column 12, line 4), (the examiner interpreted that the word detecting unit in figure 1 has the same function as the processing unit), responsive to execution of the set of instructions, for receiving a stroke parameter set describing attributes of a handwritten stroke and for determining a stroke sequence number in which the handwritten stroke was input (Column 8, line 33-38), responsive to determining the stroke sequence number (column 23, line 33-34),

comparing the stroke parameter set with a reference parameter set having a reference sequence number equal to the stroke sequence number (column 24, line 9-12) and (column 2, line 12-14) and (column 10, line 25-29), the comparison excluding a reference parameter set having a reference sequence number not equal to the stroke sequence number (column 10, line 57-59)

(16) Regarding claim 17:

The data processing system, where the reference parameter sets are maintained in fields of a table, the first instructions determining the reference sequence numbers of the reference parameter sets by the fields in which the reference parameter sets are stored (column 8, line 18-20), and (column 9, line 1-2)

(17) Regarding claim 18:

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The data processing system, where the set of instructions are adapted to identify a reference parameter set having a reference sequence number within a predefined value of the stroke sequence number, responsive to identifying the reference parameter set, and compare the stroke parameter set with the identified reference parameter set.

(Column 23, line 53-61)

(18) Regarding claim 19:

The data processing system, where the reference character dictionary includes a second record having a data element having a value indicating a number of constituent strokes of a second reference character (column 8, line 33-38), (the examiner interpreted that the second record have the same function as the other records), the set of instructions, responsive to determining the data element value is less than the stroke sequence number, excluding reference parameter sets of the second record from comparison with the stroke parameter set (column 10, line 57-59), (the examiner interpreted that when the reference parameter set of the second record have the data element value less or different then the stroke sequence number indicates a poor much, as result it will be excludes from the comparison).

(19) Regarding claim 20:

The data processing system, where the record includes a data element having a value indicating a number of constituent strokes of the reference character, the set of instructions, responsive to reading the data element (Column 8, line 33-38), (the examiner interpreted that the data element having the area numbers and a number of directions indicating the number of constituent strokes of the reference character) for determining a number of reference parameter sets to exclude from the comparison, the number of reference parameter sets excluded dependent on the value of the

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data element (Column 10, line 57-59), (the examiner interpreted that the exclusion from the comparison of the number of reference parameter sets depends upon a comparison with the value of the data element)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. in view of Reintjes (PGPUB 2002/0067854)

Ito et al. disclose a method for performing handwriting writing recognition as above.

However, Ito et al. does not disclose the receiving of an indication that the user has knowledge of the stroke order rules as recited in claim 5.

However, Reintjes teaches a method for automatic form recognition where the user has knowledge of the stroke order rules (paragraph [0010], line 8-11).

One skilled in the art would have clearly recognized that the system receives an indication that the user has knowledge of the stroke order rules (paragraph [0033], line 10, paragraph [0034], [0035], [0036], [0037], [0038], [0039], [0040], [0041], [0042]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Reintjes where the user has the knowledge of the stroke order rules in the handwriting recognition system of Ito et al. because such in feature the usage of electronic pen allows the data

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entered by the user to be captured without requiring any additional effort from the user (paragraph [0010], line 27-28), so the system automatically identifies the area of the form on which data is written by analyzing the sequence and location of the row pen stroke data to determine which field on each page was the intended field for the stroke data (paragraph [0010], line 13-16).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tang et al. (PGPUB 2002/01681107) disclose the method for recognizing handwriting Chinese characters, based on combinations of phonetic letter and stroke recognition. Furthermore Parthasarathy (US 6,226,403) discloses the method of handwriting character recognition using multi-resolution models.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571) 270-1670. The examiner can normally be reached on Monday through Friday 7:30 Am to 5:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571) 272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amara Abdi
01/10/2007



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